



Service Offering at Electrical Equipment Manufacturers

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Abstract

Purpose of the article: The aim of the paper is to uncover ways of managing service offering provided by electrical equipment manufactures in the Czech Republic. The segment is extremely important for Czech industry nowadays, especially because of many companies being subcontractors for the car industry and mechanical engineering. The producers of electric equipment comply with the Czech industry classification CZ-NACE 27.

Methodology/methods: The questionnaire in the form of the Likert scale was prepared to gather information about customer services. The respondents were usually directors or managers, *e.g.* employees with high competencies of knowing customer services in this particular market. The total of 22 companies were included in the survey. Research was focused on the following industries classifications belonging to CZ-NACE 27: CZ-NACE 27, CZ-NACE 271 and CZ-NACE 273. According to Czech Statistical Office the total number of companies belonging to these 3 segments is 136. It means 16,2% companies belonging to CZ-NACE 27 participated in our research. Basic statistical methods were used to analyse the complete database.

Scientific aim: The paper deals with the problem of service offering provided by today's manufacturers. Global understanding of services that manufacturers really develop, sell, deliver and manage is still limited.

Findings: Managing service offering provided by today's manufacturers shows that 1) Manufacturers not offer only tangible products, but also wide range of services and even information and support. 2) New products are not designed only according to company technicians, but also according to their customers. Their products and services are developed, tested and improved according to their needs. 3) Services provide complex customer care from time product selection to its end.

Conclusions: Manufacturers of tangible products need to enlarge their product offering to be able to satisfy customers. Therefore companies often focus on customer services. Adding services to the products to extend the total offering through services are possible ways of acting to eroding product margins. Customer services are able to help to extend life cycles, develop long-term relationship that lock out competitors, increase revenue, *etc.*

Keywords: service offering, customer services, servitization, manufacturers of electrical equipment, Czech Republic

JEL Classification: M30

Introduction

Many manufactures try to be competitive through a portfolio of integrated products and services nowadays. This strategy is called service-led competitive strategy. The process fulfilling this strategy is called servitization. There are many well-known companies using this strategy (e.g. Rolls-Royce, Xerox or Alstom, who all suggest some form of extended maintenance, repair and overhaul contracts). The overhaul contracts could directly linked revenue generation to asset availability, reliability and performance (Baines, Lightfoot, 2013).

However, servitization is not only adding services to current products on the markets. It is potentially just viewing the manufacturer as a service provider. This service provider is willing to improve company processes through carefully chosen business model rather than product-based innovation. Then the manufacturer focuses its design and production-based competences to give widespread improvements in efficiency and effectiveness to the customer.

So, servitization is the process of transforming manufacturers to compete through services integrated with their products, a transition from production-centric to services-centric manufacturer.

Manufacturers competing on the basis of service provision is not a new phenomenon. In the 1800s, International Harvester used services to help start their new reaping equipment among farmers in the American Midwest (Baines, Lightfoot, 2013).

The aim of the paper is to uncover ways of managing service offering provided by manufactures producing electrical equipment in the Czech Republic. This segment is very important for industry today, especially because of many companies being subcontractors for car industry and mechanical engineering. The producers of electric equipment comply with the Czech industry classification CZ-NACE 27.

1. Services provided by manufacturers

There are a lot of notifications describing services in manufacturing companies, such as:

- *industrial services* (Matthyssens, Vandenbempt, 1998);
- *product-related services* (Matthyssens, Vandenbempt, 1998);
- *product-services* or *product services* (Mathieau, 2001);
- *customer services* (Richardson, 1995; Baggs, Kleiner, 1996; Leech, 1995; Leppard, Molyneux,

1994; Timm, 2001; Sterne, 2000; Bovée, Thill, 1992; Amico, Zikmund, 2001);

- *after-sale services* (Richardson, 1995; Baggs, Kleiner, 1996; Leech, 1995; Leppard, Molyneux, 1994; Timm, 2001; Sterne, 2000; Bovée, Thill, 1992; Amico, Zikmund, 2001);
- *customer support* (Armistead, 2001). This publication says that customer support is sometimes also called as after-sale services or customer services (Kanovska, 2009).
- *services supporting business needs* (Fischer *et al.*, 2012).

This ambiguity in notifications of customer services can cause some inaccuracy in the right determination of services types. It can lead to possible misunderstandings and discrepancies.

“Customer services”, one of the above-mentioned notifications, are widely use by both academics and practitioners. Customer services are everything, what agency does for satisfaction of its customers. They help to gain higher profit from sold products. Quality and customer services present strong barrier against the competition, ensure customer loyalty, differentiate product, decrease marketing costs and increase agency (Bovée, Thill, 1992).

2. Extension of the total offering via services

Adding services to the products to extend the total offering through services are possible ways of acting to eroding product margins and the loss of strategic differentiation through product innovation and technological superiority (Fischer *et al.*, 2012). The extension of the total offering via services has been conceptualized in the literature through some diffeants notions, such as: 1) “servitization” (Vandermerwe, Rada, 1988), 2) “transition from products to services” (Oliva, Kallenberg, 2003), 3) “going downstream in the value chain” (Wise, Baumgartner, 1999), 4) “product-service systems” (Tukker, 2004), 5) “moving towards high-value solutions, integrated solutions and system integration” (Davies, 2004) and 6) “manufacturing / service integration” (Schmenner, 2009). These above mentioned views describing extension of total offering via services led to the concept called “service business development”, which can be defined as increasing value contribution of services in the capital goods industry (Fischer *et al.*, 2012).

According to Fischer *et al.* (2012), the extension of the service offerings includes the following three service categories: 1) *customer services* with the

goal to improve the quality of the customer relationship, 2) *product-related services* that are able to ensure the functionality of the product and 3) *services supporting business needs* which reach beyond the operational needs of the customer.

For many companies, an important first step to become available service provider is the bundling of products and services previously sold separately. An usual example of this bundling is the growing shares of more extensive service level agreements, which constitute various product-oriented service elements, such as: maintenance, repair and overhaul services (Kowalkowski *et al.*, 2015).

3. Examples of service categories provided by manufacturers

Services accompany products and increase their value for customers. Services can help customers to decide which product to buy. If the product is accompanied with proper services then it can be more interesting for potential buyers.

Service category “customer services” involves services related to information, delivery, billing, and documentation. The second category “product-related services” has two different types of services. The first one is called as basic services, which enable companies to react as soon as possible to product breakdowns (*e.g.* spare parts, repair, inspections and basic training). The second one is called advanced services and aims at the prevention of product breakdowns (*e.g.* preventive maintenance service, process optimization, training and maintenance contracts). The last category “service supporting business needs” involves outsourcing services, business consulting, technical consulting services, *e.g.* R&D, design and construction, feasibility studies) (Fischer *et al.*, 2012).

There can be a lot of other different types of services from the above mentioned service categories in every company; the choice usually depends on company management, employees, customers, competitors, the type of business, *etc.* Today manufacturing companies provide their services in different levels, ranges and price policy. Therefore services are often seen as the place of competitive advantage. For companies it is very essential to provide the services according to customer expectations and also product descriptions. It is accepted widely that such customer services help to increase value of products.

Services in manufacturing are activities that a manufacturer can perform to complement the products it produces. All manufacturers offer services

in some range, but some establish market differentiation through these, and so it can be thought of as following services-led competitive strategies.

Servitization is a term given to a transformation. It is about manufacturers increasingly offering services integrated with their products. Of these, some manufacturers choose to servitize by offering an extensive portfolio of relatively conventional services. Others move almost entirely into pure services, largely independent of their products, and provide offerings such as general consulting. Others still move to delivered advanced services, such as customer service agreement, risk and revenue sharing, rental agreement (Baines, Lightfoot, 2013).

4. Methodology of the research

The aim of the paper is to uncover ways of managing service offering provided by manufactures producing electrical equipment in the Czech Republic.

For the research held in manufacturing companies, the questionnaire focusing on customer services was prepared. The questionnaire was partly used from previous researches (Kaňovská, Tomášková, 2012; Bartošek, Tomášková, 2013) and was extended by adding some new questions. The part focused on customer services included the following sections: Service Offering, Importance of Services and Service Delivery. The questionnaire involved section about Company Performance and General Questions as well. The questionnaire had Likert scale form; the range of Likert scale was from 1 (No, I don't agree) to 5 (Yes, I agree).

The section of questionnaire called Service offering was evaluated for this paper. The questions related to service offering described in the paper consists of four parts. The first one was focused on general ways of managing service offering (*e.g.* Company provides wide range of customer services. New products including services are developed, tested and improved according to customer needs. More in Table 1). The second one described how total offering provided by manufacturers is consisted of (see Table 2). The third one shows the service provider in manufacturing (see chapter 5 Finding of the research). The last one pointed out the types of services, which current manufacturers offer to their customers (see Table 3).

The respondents in the research were usually directors or managers from companies producing electric equipment in the Czech Republic. Manufacturers belonged to CZ-NACE 27 (The production of Electric Equipment): CZ-NACE 27, CZ-NACE 271 and

Table 1. The items with the highest mean value related to Service Offering.

Item of questionnaire	Mean value
Extraordinary customer services focused on speed, personal communication and price are provided for so-called VIP customers.	3.68
New products including services are developed, tested and improved according to customer needs.	3.68
Customer services provide complex customer care from time product selection to its end.	3.27
Company provides wide range of customer services.*	3.15

* More than 5 different services.

Source: Author.

Table 2. Total offering in manufacturing (share in %).

Company supply consists of:	Share in %
Mostly tangible products.	29
Mixture of tangible products and services.	25
Complex of tangible products, services, information and support.	46

Source: Author.

Table 3. The type of services.

Type of service	Absolute number	Relative number
Consultancy services (e.g. technical discussion, design proposal)	21	95.45%
Technical documentation	20	90.91%
Transport services	18	81.82%
Dissassembly of present product	12	54.55%
Installation of new product	16	72.73%
Customer training	19	86.36%
Financial consultancy (e.g. leasing)	2	9.09%
Spare parts	20	90.91%
Product Exchange	17	77.27%
Extended warranty	20	90.91%
Preventive maintenance service	13	59.09%
Technical helpdesk	20	90.91%
Warranty repairs and post warranty repair	21	95.45%
On-call repairs	10	45.45%
Service provision by customer and in place of installation	18	81.82%
Renovation (also upgrades)	14	63.64%
Remote electronic diagnostic	10	45.45%
"Renting" technician	11	50.00%
Customer agreement	9	40.91%
Equipment rental agreement	4	18.18%
Integrated solution (partnership, joint R&D)	7	31.82%

Source: Author.

CZ-NACE 273. This industry is a part of manufacturing industry (CZ-NACE 10 – CZ-NACE 33) and has a long-time strong tradition in our country.

The total number of companies in the mentioned 3 segments (CZ-NACE 27, CZ-NACE 271 and CZ-NACE 273) is 136 according to Czech Statistical Office. Total of 22 SME were included in the research. It means 16,2% companies participated in

the research. To know at least the first conclusions for better overview, basic statistical methods were used to analyse the database of results in this paper.

Using the Kompas database, filtered for the Czech Republic, made the company selection. Then the firms were contacted over the phone or by email and asked to fill in a web-based questionnaire. The complete database was analyzed by using standard

statistical methods as well as other sophisticated techniques. Incomplete questionnaires were discarded. The data was collected from February to November 2014.

5. Findings of the research

The aim of this paper is to find general ways in managing service offering by current manufacturers. Therefore the data from the first section of the research, called Service Offering, were used. General findings regarding to service offering can be divided in three sections. The first one is focused on some general ways of managing service offering by producers. The second one explains how the total offering provided by manufacturers is consisted of. The third one shows the service provider in manufacturing. The last indicates which services are offered to current customers in manufacturing of electric equipment.

Using basic statistical methods did the first step of processing data from the research.

Table 1 shows the most important managing ways of service offering according to their mean value. These items of questionnaire reached the highest mean value from all questions related to service offering.

According to the findings in the Table 1, we can try to uncover some possible ways of managing service offering by manufacturers. Firstly, companies provide wide range of customer services (3,15), it means at least 5 different services provided for customers. That is a good sign of understanding of the service importance in current business. The mentioned conclusion confirms that 97% of machining companies offer at least one service, 85% of the companies offer the same in the manufacturing sector (Buschak, 2014). Secondly, service offering provides complex customer care during the product life-cycle (3,27). It means another significant point showing the way of managing service offering. It is essential not to leave customers alone after buying the products, but to be close to them during whole product life-cycle. Finally, new products are offered to customers according to their needs. They are developed, tested and then also improved not only from the view of company, but also from the view of its customers (3,68). The last point focused on service offering to so-called VIP customers confirms the higher comfort of provided services (3,68). Many businessmen emphasize the maximum care about the most profitable customers.

In general, all first findings from the research mentioned in the first section show current ways of

managing services. The range of Likert scale was from 1 (No, I don't agree) to 5 (yes, I agree). The average level is value 3,0.

The second section of the findings focused on creating total offering in manufacturing, indicates interesting conclusions as well. The question aims to the fact how the total offering is consisted of. Table 2 shows the findings.

Respondents perceive total offering mostly also with the respect to services. Total offering is a mixture of tangible products and services for 25% respondents. Moreover 46% respondents describe total offering as a complex of tangible products, services, information and support. This result confirms definitely high service impact to offering of producers in industry of electrical equipment in the Czech Republic. Only about one third of manufacturers confirmed that their total offering is just consisted of tangible products. Naturally, it is not enough for them in today's fierce competitive society.

The third section of findings shows service providers. Respondents confirmed that they mostly provide services; it means manufacturers, not distributors (3,25). For this area, it is always crucial to know how big is the company, who are their customers, which kind of services they need and how often. Then mentioned questions can more clearly demonstrate who is exactly service provider and why.

The last section indicates types of services, which respondents provide to their customers. The types of services are mentioned in the Table 3.

According to the findings in the Table 3, we can easily see which services are mostly involved in service offering of today's manufacturers. The most often services in electrical equipment manufacturing are: 1) consultancy services (e.g. technical discussion, design proposal) (95,45% of respondents), and warranty repairs and post warranty repairs (95,45% of respondents), 2) technical documentation (90,91% of respondents), spare parts (90,91% of respondents), extended warranty (90,91% of respondents) and technical helpdesk (90,91% of respondents). These mentioned services are widely offered to customers and can be perceived as the main six service types in electric equipment manufacturing in the Czech Republic. The findings show the high importance of technical background of the products. The technical consultancies, documentation, technical helpdesk, possibility of repairs or spare parts play a key role for this market and their customers. Nowadays customers have to be sure that their product is suitable for their often very unique specifications and also there is nonstop assistance for all cases of possible product failure.

Another interesting aspect can be seen from above mentioned data in Table 3. Almost one third of respondents provide integrated solutions for their customers (it is a category called services supporting business needs, more in chapter 3). The importance of integrated solutions is still increasing and helps manufacturers to maintain long-lasting relationships with their customers.

On the other hand, the lowest relative numbers have financial consultancy (*e.g.* leasing) (9,09%) and equipment rental agreement (18,18%).

To sum up, current manufacturers provide services mentioned in the chapter 3, called "Examples of service categories provided by manufacturers". Services divided into three mentioned categories, as customer service, product-related services (basic and advanced services) and service supporting business needs. The mentioned services categories are all available for today's customers on manufacturing markets.

6. Discussions

The paper describes some problems of managing service offering provided by electric equipment manufacturers. This area is very exciting but still not sufficiently well described. Global understanding of services that manufacturers really develop, sell, deliver and manage is still limited. Therefore the research defining more deeply Service Offering, View of Importance of Services and Service Delivery was prepared. Producers of electric equipment in the Czech Republic held the research. Some companies participating in the research were also large multinational companies with the high respect to services.

In fact, these findings are the beginning of future work. It could be seen as introduction to the future extensive study of perception customer services provided by producers of electric equipment. Basic statistical methods were used to analyse the database of results in this paper. This aspect could be evaluated as the limitation of this paper. However, this first step in the process of evaluation of findings is essential for future progress. It is important to know some ways of managing service offering in manufacturing to have better overview for future work.

Next intention is to evaluate properly all parts of questionnaire by using more sophisticated statistical methods and compare the data from many different views to know more about service strategies provided by current manufacturers during next months.

Most important findings show some possible ways of managing service offering and confirm the significant interest of manufacturing companies for services. Manufacturers not offer only tangible products, but also wide range of services and even information and support. This is the major step in the process of servitization of manufacturers. To be able to add a couple of services to products is the necessity today. Moreover, new products are not designed only according to company technicians, but also according to their customers. Their products and services are developed, tested and improved according to their needs. Finally, services provide complex customer care from product selection to its end. All the mentioned aspects show some principles of managing service offering in general view. Manufacturers have to manage service offering to be able to survive on the market and also be profitable.

7. Conclusions

Many manufacturers often build their competitive strategies on adding services to their total offering. Therefore the challenge is to understand the problem of services deeply. Well-managed services can help to enhance the power of current companies.

The paper is focused on service offering of today's electric equipment manufacturers in the Czech Republic. Service offering could be seen as an important starting point for the managing and evaluating services from the view of the company and also from the view of the customers.

Providing innovative combinations of products and services suggests that companies develop, manufacture and provide products; develop and deliver services; integrate and combine products and services creatively for tailor-made solutions. Such a combination leads to the high-value unified responses to the needs of customers (Davies *et al.*, 2007).

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